

CLAIMS

What is claimed is:

1. A guide assembly for forming a tunnel through a proximal end of a tibia comprising:

a brace having a first end and an opposing second end;

a template mounted on the first end of the brace, the template being adapted to rest on a lateral or medial facet at a proximal end of the tibia; and
a tubular guide sleeve having a proximal end and an opposing distal end, the tubular guide sleeve being adjustably mounted on the second end of the brace such that when the template is disposed on the lateral or medial facet of the tibia, the distal end of the tubular guide sleeve can be selectively biased against a lateral, medial, or anterior side of a proximal end of the tibia.

2. A guide assembly as recited in claim 1, wherein the brace has a substantially U-shaped configuration.

3. A guide assembly as recited in claim 1, wherein the template comprises a base plate having a surface substantially complementary to at least a portion of the lateral or media facet of the tibia.

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4. A guide assembly as recited in claim 1, wherein the template comprises a base plate and a projection extending from the base plate, the projection being positioned to catch against a posterior side of the tibia when the base plate is mounted on the lateral or medial facet of the tibia.

5. A guide assembly as recited in claim 1, wherein the template comprises a base plate and a projection extending from the base plate, the projection being positioned to bias against a lateral, medial, or anterior side of the tibia when the base plate is mounted on the lateral or medial facet of the tibia.

6. A guide assembly as recited in claim 1, wherein the template is adjustably mounted to the brace.

7. A guide assembly as recited in claim 6, further comprising marking formed on the template, the markings defining the position of the template relative to the brace.

8. A guide assembly as recited in claim 1, further comprising a plurality of alternative templates each having a different configuration, the template being selected from the plurality of alternative templates.

9. A guide assembly as recited in claim 1, wherein the tubular guide sleeve has a central longitudinal axis that intersects with the template.

10. A guide assembly as recited in claim 1, wherein a plurality of teeth are formed on the distal end of the tubular guide sleeve.

11. A guide assembly as recited in claim 1, further comprising:
a tubular drill sleeve slidably disposed within the tubular guide sleeve;
and
a guide wire rotatably disposed within the tubular drill sleeve.

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12. A guide assembly for forming a tunnel through a proximal end of a tibia comprising:

a brace having a first end and an opposing second end;

a template mounted on the first end of the brace, the template comprising a base plate being adapted to rest on a lateral or medial facet at the proximal end of the tibia and a projection extending from the base plate, the projection being positioned to bias against a posterior, anterior, lateral, or medial side of the tibia when the base plate is mounted on the lateral or medial facet of the tibia; and

a tubular guide sleeve having a proximal end and an opposing distal end, the tubular guide sleeve being adjustably mounted on the second end of the brace.

13. A guide assembly as recited in claim 12, wherein the brace has a substantially U-shaped configuration.

14. A guide assembly as recited in claim 12, wherein the base plate has a surface substantially complementary to at least a portion of the lateral or medial facet of the tibia.

15. A guide assembly as recited in claim 12, wherein the template is adjustably mounted to the brace.

16. A guide assembly as recited in claim 15, further comprising marking formed on the template, the markings defining the position of the template relative to the brace.

17. A guide assembly as recited in claim 12, further comprising a plurality of alternative templates each having a different configuration, the template being selected from the plurality of alternative templates.

18. A guide assembly as recited in claim 12, wherein the tubular guide sleeve has a central longitudinal axis that intersects with the template.

19. A guide assembly as recited in claim 12, wherein the tubular guide sleeve has a distal end, a plurality of teeth being formed on the distal end.

20. A guide assembly as recited in claim 12, further comprising:
a tubular drill sleeve slidably disposed within the tubular guide sleeve;
and
a guide wire rotatably disposed within the tubular drill sleeve.

21. A method for forming a tunnel through a proximal end of a tibia, the method comprising:

positioning a template on a lateral or medial facet at a proximal end of a tibia;

securing a tubular guide sleeve against an anterior, lateral, or medial side of a proximal end of the tibia; and

using the guide sleeve as a guide, drilling a tunnel having a proximal end on the anterior, lateral, or medial side of the tibia and a distal end on the lateral or medial facet of the tibia.

22. A method as recited in claim 21, wherein the act of positioning the template comprises substantially covering the entire lateral or medial facet with the template.

23. A method as recited in claim 21, wherein the act of positioning the template comprises positioning a base plate of the template on the lateral or medial facet of the tibia so that a projecting extending from the base plate biases against a posterior, anterior, lateral, or medial side of the proximal end of the tibia.

24. A method as recited in claim 21, wherein the act of positioning the template comprises test fitting a plurality of alternative templates on the lateral or medial facet of the tibia, each alternative template having an alternative configuration, the template being selected from the alternative templates.

25. A method as recited in claim 21, wherein the template is mounted to a brace, the method further comprising selectively adjusting the position of the template relative to the brace based on the desired position for the tunnel.

26. A method as recited in claim 21, wherein the tubular guide sleeve has a central longitudinal axis, the act of securing a tubular guide sleeve comprising aligning the guide sleeve so that the central longitudinal axis of the guide sleeve intersects with the template.

27. A method as recited in claim 21, wherein the act of drilling the tunnel comprises:

positioning a drill tool within the tubular guide sleeve; and
advancing the drill tool through the proximal end of the tibia so that the drill tool contact the template.

28. A method as recited in claim 27, wherein the drill tool comprises a guide wire or drill bit.

29. A method as recited in claim 21, wherein the act of drilling the tunnel comprises:

positioning a tubular drill sleeve within the tubular guide sleeve;
advancing a guide wire through the drill sleeve and the proximal end of the tibia;
removing the drill sleeve and guide wire from the guide sleeve; and
advancing a drill tool having a diameter greater than the diameter of the guide wire through the guide sleeve and the proximal end of the tibia.

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